ATTACHMENT J3

Altus AFB Water Distribution System

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J3.1 Altus AFB Overview

Altus Air Force Base (AFB), located within the Altus city limits in Jackson County, Oklahoma, is an Air Education and Training Command (AETC) installation that operates AETC's strategic airlift and aerial refueling flying training schools. Altus AFB is the Air Force's primary Air Mobility Training Center for pilots, navigators, flight engineers, loadmasters, and boom operators. The host command is the 97th Air Mobility Wing (97 AMW). The Wing is the nation's only C-5, C-17, and KC-135 strategic airlift, aerial delivery, and aerial refueling training school.

Altus AFB occupies 4,698 acres, including 338 acres in Military Family Housing, (acquired circa 1941). The Base contains approximately 1,000 buildings totaling over 3.6 million square feet (msf) comprised of the following major functional categories: Industrial: 744,000 square feet (SF); Administrative: 246,000 SF; Military Family Housing (MFH): 1,330,000 SF; Unaccompanied Housing: 430,000 SF; Transient Quarters: 16,000 SF; and Other Community/Support: 834,000 SF. Altus AFB has two runways and one assault strip. The primary runway measures 13,440 feet by 300 feet; the parallel runway measures 9,000 feet by 225 feet; and the assault strip measures 3,500 feet by 150 feet. Authorized aircraft for this Installation are C-5As, KC-135Rs, and C-17s.

There are no known factors that would effect any significant changes in total Altus building space and the consequent increase or decrease of utility requirements.

The Base has a total population of approximately 5,000, including military personnel, civilian employees and support personnel, students, and dependents. Based on payroll, construction, and operational expenditures, it is estimated that Altus AFB has a profound economic impact on the local community of over $345 million annually.

J3.2 Water Distribution System Description

J3.2.1 Water Distribution System Fixed Equipment Inventory

The Altus AFB water distribution system consists of all appurtenances physically connected to the distribution system from the point in which the distribution system enters the Installation and Government ownership currently starts to the point of demarcation, defined by the Right of Way. The system may include, but is not limited to, pipelines, valves, fire hydrants, storage facilities, exterior backflow devices, pumps, and meters. The actual inventory of items sold will be in the bill of sale at the time the system is transferred. The following description and inventory is included to provide the Contractor with a general understanding of the size and configuration of the distribution system. The Government makes no representation that the inventory is accurate. The Contractor's proposal shall be based on site inspections, information in the technical library, other pertinent information, and to a lesser degree the following description and inventory. Under no circumstances shall the Contractor be entitled to any service charge adjustments based on the accuracy of the following description and inventory.

Specifically excluded from the water distribution system privatization package:

- Non-potable fire systems, including non-potable water storage tanks.
- Irrigation systems.

J3.2.1.1 Description

The City of Altus, Oklahoma, supplies potable water to Altus AFB to satisfy domestic, industrial and irrigation requirements. The City's source is Tom Steed Reservoir, a surface impoundment located approximately 15 miles northeast of Altus AFB. The City's water filtration plant, located approximately three miles west of Altus AFB, supplies the water through one 10-inch and one 16-inch main, which enters the Base near the Main Gate. The water is supplied at 70 pounds per square inch gauge (psig). The City maintains three large meters located at the delivery point.

The water is pumped from the City's meters to the elevated storage tanks. The elevated storage tanks have capacities of 500,000 and 250,000 gallons. Both tanks are configured with impressed current cathodic protection systems that include an interior array of suspended anodes. The Base has no pumping facilities except for small recirculating pumps on each elevated tank.

There are two water system areas within Altus AFB. One area is the Main Base area and was constructed in the 1950s and the other for military family housing (MFH) which can be further divided into three sections: Capehart, Bicentennial, and the new Great Plains MFH. The Main Base area was constructed in the 1950s and consists primarily of asbestos cement pipe. While the Main Base is primarily looped, outlying areas and facilities on the perimeter of the Main Base are on dead-end lines that require monthly flushing to maintain adequate chlorine residuals. Approximately 4.6 percent of the distribution pipe in this area is beneath roadways and 0.5 percent is beneath concrete taxiways.

Capehart is the original family housing area and was built in the 1950s. Around 1990, all the water mains in Capehart were replaced with C900 polyvinyl chloride (PVC) pipe. Around 1997, all of the isolation valves in Capehart were replaced. In addition, all road crossings in Capehart have been bored and sleeved. Capehart utilizes copper services, which have not been replaced. Approximately 2.2 percent of the distribution pipe in this area is beneath roadways.

Bicentennial family housing area was built around 1976. The original SDR35 PVC mains are still in use as well as are the original plastic services. Approximately 1.7 percent of the distribution pipe in this area is beneath roadways.

The third family housing area, Great Plains Family Housing, was completed in 1999. C900 PVC pipe was used throughout. Approximately 2.2 percent of the distribution pipe in this area is beneath roadways.

Depth of burial for water mains averages between 36 and 48 inches.

Most PVC mains were installed with tracer wires.

Military and civilian personnel operate and maintain the water system.

There are no potable water components to be privatized at the satellite operating locations (NEXRAD Radar Site, ILS Middle Marker Site, and Drop Zone).

J3.2.1.2 Inventory

Table 1 lists major components of the Altus AFB water distribution system included in the sale. Drawings used to develop the inventory were the U.S. Corps of Engineers Utility Plan (1997) C-15 Sheet 17, C-16 Sheet 18 and C-17 Sheet 19 of 69 for the Great Plains Housing Area, and the Altus Comprehensive Plan (1968) Tab G-1 Sheets 1 and 2 for the remaining installation inventory. A list of the existing utility meters for the potable water system was provided by the Installation and was also used in the development of the inventory components.

TABLE 1
Fixed Inventory
Water Distribution System - Altus AFB

Item	Size	Quantity	Unit	Approximate Year of Construction
MAIN BASE				
Pipe				
Asbestos Cement	3″	4,910	LF	1950
Asbestos Cement	4″	10,890	LF	1950
Asbestos Cement	6″	11,550	LF	1950
Asbestos Cement	8″	33,880	LF	1950
Asbestos Cement	10″	3,430	LF	1950
Asbestos Cement	12″	9,290	LF	1950
Cast Iron	<2″	1,890	LF	1950
Cast Iron	3″	450	LF	1950
Cast Iron	4″	560	LF	1950
Cast Iron	6″	6,520	LF	1950
Cast Iron	6″	6,520	LF	1990
Cast Iron	8″	2,520	LF	1950
Cast Iron	8″	2,530	LF	1990
Cast Iron	10″	990	LF	1950
Cast Iron	10″	980	LF	1990
Cast Iron	12″	200	LF	1950
Cast Iron (Services)	3″	11,200	LF	1950
Galvanized	<2″	420	LF	1950
Galvanized	2″	170	LF	1950
Galvanized	3″	600	LF	1950
Polyethylene	6″	400	LF	1950
Polyethylene	8″	2,250	LF	1950
Polyethylene	10″	4,560	LF	1950
Valves				
Valves	<2″	2	EA	1950

Item	Size	Quantity	Unit	Approximate Year of Construction
Valves	2″	1	EA	1950
Valves	3″	3	EA	1950
Valves	4″	16	EA	1950
Valves	6″	40	EA	1950
Valves	8″	63	EA	1950
Valves	10″	27	EA	1950
Valves	12″	7	EA	1950
Altitude Valves	8″	2	EA	1955
Valves (Services)	3″	112	EA	1950
Services				
Service Connections		112	EA	1960
Fire Hydrants				
Fire Hydrants		113	EA	1960
Fire Hydrants		38	EA	1995
Storage Tanks				
Elevated Tanks	500,000 Gal	1	EA	1955
Elevated Tanks	250,000 Gal	1	EA	1955
Cathodic Protection Magnesium Anode	#9	2	EA	1980
Cathodic Protection Reference Cell		2	EA	1980
Cathodic Protection Rectifier	28V/10A	2	EA	1980
Cathodic Protection Cable	#2	1,000	LF	1980
Cathodic Protection Test Station		2	EA	1980
Booster Station				
Pumping Station (Recirc.)		7.5	HP	1955
Pumping Station (Recirc.)		7.5	HP	1955
Meters				
Meters		53	EA	1950

Notes:
PVC = polyvinyl chloride
Gal = gallon
LF = linear feet
EA = each
HP = horsepower
GPM = gallons per minute

J3.2.2 Water Distribution System Non-Fixed Equipment and Specialized Tools

Generally, **Table 2** would list other ancillary equipment (spare parts) and **Table 3** would list specialized vehicles and tools included in the purchase. However, there are no significant spares nor are there vehicles or special purpose equipment items available for release.

TABLE 2
Spare Parts
Water Distribution System - Altus AFB

Quantity	Item	Make/Model	Description	Remarks
None				

TABLE 3
Specialized Vehicles and Tools
Water Distribution System - Altus AFB

Description	Quantity	Location	Maker
None			

J3.2.3 Water Distribution System Manuals, Drawings, and Records

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

TABLE 4
Manuals, Drawings, and Records
Water Distribution System - Altus AFB

Quantity	Item	Description	Remarks
1	Drawing	Master Plan (1968), Tab G-5	Sheets 1 & 2
1	Drawing	COE Utility Plans, Great Plains Housing (1997)	C-15 Sheet 17, C-16 Sheet 18 and C-17 Sheet 19
1	Listing	Utility Meters	Reflects facility function and building number
1	Reference Manual	Isolation Valves	Reflects precise location of valves

J3.3 Specific Service Requirements

The service requirements for the Altus AFB water distribution system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Altus AFB water distribution system and are in addition to those found in Section C. If there is a conflict between requirements described below and Section C, the requirements listed below take precedence over those found in Section C.

- The Contractor will be required to mark his own utilities and will be responsible for initiating, officiating, and tracking digging permits for his own utilities. The Contractor will provide not less than two (2) and not more than five (5) working days notice (emergencies being excepted) of any needed excavations to 97 CES and to said Utilities Privatization Administrative Contracting Officer so the location of

underground utilities may be located and marked by the applicable utility owner. The applicable utility owner must mark their utilities as requested within forty-eight (48) hours of receipt of request for non-emergency work.

- The Contractor shall enter into a Memorandum of Understanding (MOU) with the Base Fire Department for fire protection of all facilities included in the purchase of the utility. The MOU shall be completed during the transition period and a copy provided to the Contracting Officer.
- The Contractor shall perform flow testing and marking of fire hydrants IAW National Fire Protection Association standards/recommended practices. The government reserves the right to review flow test records. The Contractor shall be required to meet all unique and specific fire-flow requirements for the Base, which will be listed and available in the Utilities Privatization Technical Library.

J3.4 Current Service Arrangement

- ***Provider Name:*** City of Altus
- ***Usage:*** Total annual consumption for the Base is approximately 340 million gallons.
- ***Annual Usage Fluctuations:*** While annual fluctuations are negligible, seasonal variance is significant. Since much of total water consumption is for irrigation, the peak months are nearly always the warm, dry months of June through September. Peak month is nearly always August with consumption averaging nearly 50,000 thousand gallons (kGal) while December is generally the month with lowest consumption of less than 15,000 kGal.
- The Base provides water to Mendel Rivers Elementary School, a former DoD school that has been turned over to the local school district. The water is metered and the Base is reimbursed.

J3.5 Secondary Metering

J3.5.1 Existing Secondary Meters

Table 5 provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings for all secondary meters IAW Paragraph C.3.3 and J3.6 below.

TABLE 5
Existing Secondary Meters
Water Distribution System - Altus AFB

Meter Count	Facility Function	Building Number
1	MOBILITY CENTER	370
2	RECYCLE	400
3	SOCIAL ACTION	418
4	ARTS & CRAFTS (MWR)	342/343
5	COMMISSARY	16A

Meter Count	Facility Function	Building Number
6	COMMISSARY	16B
7	BX – EXCHANGE	18A
8	BX – BY PASS	18B
9	HOUSING METER A – NORTH**	MFH W A
10	HOUSING METER A – NORTH**	MFH W B
11	YOUTH CENTER (MWR)	1866
12	HOSPITAL WAREHOUSE	51
13	SOFTENER BOILER ROOM	46A
14	WATER SOFTENER	46B
15	NEW CHILD CARE	53
16	OFFICERS CLUB (MWR) NORTH	39A
17	OFFICERS CLUB (MWR) SOUTH	39B
18	CONSOLIDATED SUPPORT	52
19	DRIVING RANGE/CLUB	35C
20	GOLF COURSE (FAIRWAY)	35D
21	C-17 TRAINING	172
22	KC-135 CARGO TRAINER	190
23	KC-135 AIRCREW TRAINING	179
24	POST OFFICE	129
25	COMMUNITY ACT CENTER	148
26	SIMULATORS	87
27	SIMULAOTRS	88
28	SIMULATORS	89
29	VOQ	84
30	VOQ	75
31	VOQ	76
32	BASE GYM	156A
33	BASE GYM	156B
34	PKG STORE (AAFES)	63
35	TOYLAND (AAFES)	68
36	CHILD CARE	65
37	NEW CREDIT UNION	N/A
38	CHILD CARE ANNEX	64
39	NCO CLUB WEST	307A
40	NCO CLUB EAST	307B
41	LIBRARY (MWR)	302
42	BOWLING ALLEY (MWR)	106
43	CHAPEL ED CENTER	116
44	DATA AUTO BOILER ROOM	218A
45	DATA AUTO BOILER ROOM	218B
46	COMMUNICATION FACILITY	215
47	CORPS OF ENGINEERS	214
48	DINING HALL	317
49	GAS STATION (AFFES)	303
50	443 MAINTENANCE	228
51	CAR WASH	321
52	HOUSING MAINTENANCE	2002
53	SCHOOL	MRS

Notes:
**Primary Meter

J3.5.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 6**. New secondary meters shall be installed IAW Paragraph C.13, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Paragraphs C.3.3 and J3.6 below.

TABLE 6
New Secondary Meters
Water Distribution System - Altus AFB

Facility Function	Building Number
Lighthouse for the Blind	398

J3.6 Monthly Submittals

The Contractor shall provide the Government monthly submittals for the following:

1. **Invoice** (IAW G.2): The Contractor's monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Invoices shall be submitted by the 3rd of each month for the previous month. Invoices shall be submitted to:

   Name: Bron Howard
   Address: 97 CES/CEOE
   401 L Avenue
   Altus AFB, OK 73523
   Phone number: (580) 481-7638

2. **Outage Report**: The Contractor's monthly outage report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall be submitted by the 3rd of each month for the previous month. Outage reports shall be submitted to:

   Name: Bron Howard
   Address: 97 CES/CEOE
   401 L Avenue
   Altus AFB, OK 73523
   Phone number: (580) 481-7638

3. **Meter Reading Report**: The monthly meter reading report shall show the current and previous month readings for all identified secondary meters. The Contractor's monthly meter reading report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Meter reading reports shall be submitted by the 3rd of each month for the previous month. Meter reading reports shall be submitted to:

Name: Bron Howard
Address: 97 CES/CEOE
401 L Avenue
Altus AFB, OK 73523
Phone number: (580) 481-7638

J3.7 Water Conservation Projects

IAW Paragraph C.3, Utility Service Requirement, there are currently no ongoing water conservation initiatives that would materially affect the water distribution system.

J3.8 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Altus AFB boundaries.

J3.9 Off-Installation Sites

No off-Installation sites are included in the sale of the Altus AFB water distribution system.

J3.10 Specific Transition Requirements

IAW Paragraph C.13, Transition Plan, **Table 7** provides a listing of service connections and disconnections required upon transfer.

TABLE 7
Service Connections and Disconnections
Water Distribution System - Altus AFB

Location	Description
None	

J3.11 Government Recognized System Deficiencies

Table 8 provides a listing of system improvements that the Government has planned. The Government recognizes these improvement projects as representing current deficiencies associated with the Altus AFB water distribution system. If the utility system is sold, the Government will not accomplish these planned improvements. The Contractor shall make a determination as to its actual need to accomplish and the timing of any and all such planned improvements. Capital upgrade projects shall be proposed through the Capital Upgrades and Renewal and Replacement Plan process and will be recovered through Schedule L-3. Renewal and Replacement projects will be recovered through Sub-CLIN AB.

TABLE 8
System Deficiencies
Water Distribution System - Altus AFB

Project Location	Project Description
Water System	A comprehensive flow study is required for the Altus AFB water distribution system. There are chronic pressure problems that should be analyzed followed by corrective measures.
Water System	Install automatic flushing devices. There are several sections of the distribution system that have "dead ends" that must be periodically flushed manually.